

The course of the 1938-1939 campaign in Czechoslovakia. I. The beet, yield and purification of juices. Jili Vondrák... *Litý cukrov*. 57, 101, 201 (in German, 211, 27) (1939); cf. C. A. 32, 1939P. II. The filtration, evaporation, concentration, crystallization and heat and yield balance. K. Šandera. *Ibid.* 262, 104 (in German, 210). Frank Mareš

*ca*

The influence of the temperature of the extracted slices  
on their composition during acidification. Jiri Vondrak,  
Z. Zuckerind., Czechoslovak. Rep. 62, 193-9(1938). See  
C. A. 32, 3K79.

Frank Mareš

28

CA

A third supplement to the fourth publication of Directions for Conducting Chemical Analyses in Sugar Establishments According to Standard Methods. JIH Vondrák. *Čistý cukr*, 39, 42-3 (1937); *Z. Zuckerind. Tschechoslovak. Rep.* 62, 54-5. The 12 modifications of procedures approved by a commission of experts are given in their new forms. Frank Mareš

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM STEELMAKING

GROUPS

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REVISION

REVISION ONLY ONE

20

Further studies upon the action of packing upon stored  
and acidified slices. JIN Vondrák. Z. Zuckerind. Techn.  
slovák. Rep. 61, 177-83(1937).—See C. A. 30, 1972.  
P. Marshall

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION



The influence of temperature upon the storage of extracted slices in pits. Jili Vondrák. *Lilij. Chřestov.* 59, 13-18 (1937).--A fraction of a batch of select beet slices at was packed in brick-lined pits in the customary manner at a temp. of 18° and was used as a control; the remainder of the batch was heated to 50°, was transported at 40°, and was packed into brick-lined pits at 30-37°. After 5.5 months of storage the control batch of slices showed an 18% loss in vol., a 17.2% loss in wt., a 28% loss in pulp, a  $\phi$  of 4.2, a 19.1% loss in total N, and a white granular appearance, but the warmed batch showed a 44% loss in appearance, but a 38.7% loss in wt., a 46% loss in pulp, a  $\phi$  of 4.0, a 13.7% loss in total N, and a yellow, slimy appearance with liquids draining from the interspaces. Other pits increased after 7 months of storage showed an addnl. increase in the analytical differences between the controls and the warmed slices. At another place the packing of warmed slices at 30-37° and of control slices at 18° gave similar results (unfavorable to the warmed slices). At a third place these observations were reversed: after 4 and 8.5 months of packing the warmed slices (deposited at 30-35°) and the control slices (packed at 18°) showed similar changes but with the slightly greater changes occurring in the control batches of slices. V. concludes that many biol. changes may occur during the storage of slices, that the changes which may predominate during the months of packing depend upon local conditions (character of pits, flora, etc.) and that the effects of a special treatment (before packing) with definite results in mind will be lost under the influence of the predominating local conditions.

Frank March

Frank Maresca

AS 52A METALLURGICAL LITERATURE CLASSIFICATION

1991 1992 1993 1994

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VONDRAKOVA, I.

ELEFANT, E.; REJEDLA, Z.; VONDRAKOVA, I.

Organization of wards for newborn; care of premature. Pediat.  
listy 6 no.3:182-184. May-June 1951. (CML 20:11)

1. Of the Institute of Care for Mother and Child in Prague-  
Podole (Director — Prof. J. Trapl), Head of the Pediatric  
Division Docent K. Kubat, M.D.



Вопросы

Вопросы

VONDŘÁČKOVÁ, JITKA

Preparing sparingly soluble salts of nicotetrazolone with  
amines. Methylamine, dimethylamine, triethylamine, and Jitka  
Vondráčková, Czechoslovakia. *Chem. Abstr.* 1964, 59, 12404.  
Sparingly soluble salts of nicotetrazolone with amines were  
prepared. In a series of experiments, the authors prepared  
sparingly soluble salts of nicotetrazolone with amines by  
stirring a solution of nicotetrazolone in water with an  
aqueous solution of the amine. The resulting salts were  
precipitated by adding a solution of sodium hydroxide to the  
NaOH the ppt. is filtered and purified by the subsequent  
conversion to a sol. salt of 1,2,4,5-tetrazol-3-one.

L 29478-66 SCTB DD

ACC NR: AP6019953

SOURCE CODE: 02/0079/65/007/003/0236/0238

AUTHOR: Vondrakova, M.

ORG: Department of General Hygiene and Communal Hygiene, Medical Faculty of Hygiene  
Charles University, Prague (Katedra hygieny obecne a kommunalni lek. fak. hygienicke  
KU)

TITLE: Changes in the serum level of free fatty acids in rats repeatedly exposed  
to noise ✓

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 236-238

TOPIC TAGS: rat, acoustic biologic effect, serum, biochemistry

ABSTRACT: Changes in the content of free fatty acids in the serum of the rats indi-  
cate that repeated noise influences their level. The level of the acids increases  
substantially after extended exposure to noise. No differences in the influence of  
noise were due to the age of the rats when first exposed to the noise. Orig. art.  
has: 2 tables. [JPRS]

SUB CODE: 06/ SUBM DATE: 06Feb65

Card 1/1 FV

BABUREK, Jiri; VONDRAKOVA, Milena, inz.

Comparison of properties of paper clays. Papir a celuloza 19  
no. 7:195-197 JI '64.

1. Institute of Plain Pottery Technology and Ceramic Material  
Dressing, Karlovy Vary (for Baburek). 2. Research Institute of  
Paper and Cellulose, Prague.

BABUREK, Jiri; VONDRAKOVA, Milena

Examination of monodisperse fractions of Sedlec kaolin with the electron microscope. Silikaty 7 no.4:284-293 '63.

1. Ustav technologie hrube keramiky a upravnictvi keramickych surovin, Karlovy Vary; Vyzkumny ustav papiru a celulosy, Praha.

Z/009/61/000/012/001/005  
E112/E953

AUTHORS:

Zahradník, Lubomír, Formánek Zdeněk, Šťovík  
Miroslav, Tyroler Jiří and Vondráková Zdena

TITLE:

Recovery of germanium dioxide from flue dusts

PERIODICAL:

Chemický průmysl, no.12, 1961, 625-629

TEXT:

The only domestic sources of germanium in Czechoslovakia are the flue dusts from certain coals (germanium contents range from 0.2 to 0.8%) and the present paper discusses three possible methods of recovery via germanium dioxide: 1) Extraction with water or inorganic solvents, such as  $H_2SO_4$ ,  $HCl$ ,  $HNO_3$ ,  $NaOH$  and  $(NH_4)_2Sx$ . Best results are achieved with 0.05 N- $H_2SO_4$ , yielding up to 97% of the available germanium. Extraction efficiency is closely connected with the physical characteristics of the flue dusts, good recoveries being obtainable only with flue dusts of very fine particle size. Furthermore, only germanium available in soluble form will respond to the method. 2) Chlorination of flue dusts. This process can be operated either at lower temperatures, in presence of steam, or at high temperatures, in presence of air. Compared to the distillation method with  $HCl$ ,  
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Recovery of germanium ...

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yields of germanium are inferior and the recovered products less pure. A further rectification is therefore necessary. The chlorination method, on the other hand, offers the advantage that even very low-content flue dusts can be processed. 3) Direct distillation with HCl. This method is considered the simplest from the technological point of view. It is only suitable for raw materials, containing germanium in a volatilisable form and is not economical for flue-dusts with low germanium content. The method consists of treating the flue dust with HCl, and procedures for the separation of the formed  $\text{GeCl}_4$  are described in detail. So far, this has been effected in two ways: a) Absorption of the gaseous mixture in water, containing 20% HCl. A recovery of 2-13 g germanium per 1 litre is feasible but this is considered unsatisfactory. b) separation of germanium tetrachloride by condensation. However, considerable amounts of  $\text{GeCl}_4$  are entrained by HCl, and the method is, therefore, rejected as uneconomical. The authors now offer a new procedure for  $\text{GeCl}_4$  absorption, based on the use of non-polar solvents, of which carbon tetrachloride has proved the most suitable. The efficiency of a 0.2%  $\text{GeCl}_4$  solution in  $\text{CCl}_4$

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Recovery of germanium ...

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is given as 97-99.5% at 20°C. As practical processing would require large volumes of  $\text{CCl}_4$  (1500 kg/kg Ge) a two-step absorption process is suggested. A diagram of a laboratory arrangement for the continuous recovery of germanium tetrachloride by the carbon tetrachloride method is shown (Fig.6). The apparatus operates under slight vacuum and has a capacity of 30 kg flue dust per day. The solution of  $\text{GeCl}_4$  in  $\text{CCl}_4$  is preliminarily refined by extraction with concentrated hydrochloric acid, containing 10% nitric acid. Hydrolysis of  $\text{GeCl}_4$  is carried out in the usual way. The experience gained in laboratory trials led to the construction of a semi-technical batch-wise unit, which in two months produced 10 kg germanium dioxide from 1000 kg flue dust. There are 5 tables, 5 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet bloc. The English-language references read as follows: Ref.1: Journal of Metals, 979(1953); Ref.2: Johnson O.H., Chemical Reviews, vol.51, 432 (1952); Ref.5: Aubrey K.V., Nature, vol.176, 2 (1955). ✓

ASSOCIATION: Ústav nerostných surovin, Praha  
(Institute for Mineral Raw Materials, Prague)

Card 3/54



Recovery of germanium ...

Z/009/61/000/012/001/005  
E112/E953

SUBMITTED: January 16, 1961

Fig.6. Legend.

- 1 - mixing vessel, with stirrer, for absorption of flue dust in hydrochloric acid,
- 3,4 - steam-heated boiling tubes,
- 5 - separator,
- 6 - condenser,
- 7 - absorption vessel,
- 8 - absorption column with Raschig rings,
- 10 - separating funnel with  $\text{CCl}_4$ ,
- 9 - condenser, cooled to  $0^\circ\text{C}$ ,
- 11 - reservoir, to which a slight vacuum is applied.

Card 4/54

VONDRAKOVA, Zdena, inz.; ZAHRADNIK, Lubomir, dr., inz., laureat statni  
~~ceny~~; STOVIK, Miroslav, inz., laureat statni ceny

Gallium and its raw materials in Czechoslovakia. Geol pruzkum  
5 no.5:142-143 My '63.

1. Ustav nerostnych surovin, Kutna Hora, pracoviste v Praze.

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Z/009/61/000/007/001/004  
E112/E135

AUTHORS: Zahradník, Lubomír, Formánek, Zdeněk, Šťovík, Miroslav,  
Tyroler, Jiří, and Vondráková, Zdena

TITLE: Properties of furnace flue dusts and their use for the  
recovery of germanium

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 337-341

TEXT: Coal which is rich in germanium was ashed in a reducing  
atmosphere and coarser fractions were separated by means of  
cyclones. Flue dust of finer particle size was recovered by  
electrostatic separation and this contained up to 1% germanium.  
Industrial recovery of germanium was considered feasible and  
therefore laboratory methods for its extraction and the nature of  
the bond between germanium and the flue dust particles were studied.  
The flue dust was separated into different fractions according to  
particle size and the relationship between germanium concentration  
and particle size was investigated. Germanium contents decreased  
as the particle size increased and, consequently, main attention  
was paid to flue dust smaller than 60  $\mu$  (0.12% Ge). During the  
ashing of coal a number of elements are volatilized and absorbed  
Card 1/4

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Z/009/61/000/007/001/004  
E112/E135

Properties of furnace flue dusts and their use for the recovery of germanium

from the gaseous phase by the flue dust particles. The sorption process was studied by determining the concentrations of the various elements in the original coal and the flue dust. Spectroscopic methods of analysis were used and results are tabulated. On the average, the flue dusts contained between 27 and 33% combustible materials. Their concentration decreased on extraction with 0,2 N-H<sub>2</sub>SO<sub>4</sub>, indicating that they did not consist entirely of carbon. Results for three types of flue dust are tabulated, showing the following: 1) loss of weight of flue dust on calcination; 2) loss of weight of flue dust on calcination, after extraction with H<sub>2</sub>SO<sub>4</sub>; and 3) loss of weight of flue dust on extraction with H<sub>2</sub>SO<sub>4</sub>. Results of spectrographic analyses of flue dusts, H<sub>2</sub>SO<sub>4</sub>-extracts and extraction residues are submitted, listing all elements occurring in the three different fractions in the following concentrations: 1) higher than 1%; 2) 1.0-0.1%; 3) 0.1-0.01%; and 4) lower than 0.01%. The following values are tabulated for germanium: original sample of flue dust, 1 - 0.1%;

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Z/009/61/000/007/001/004  
E112/E135

Properties of furnace flue dusts and their use for the recovery of germanium

H<sub>2</sub>SO<sub>4</sub>-extract, 1 - 0.1%; ashing residue of H<sub>2</sub>SO<sub>4</sub>-extract, 0.1 - 0.01%. Extraction methods for germanium from flue dusts, using water, acids, and alkalis, are described. Water extraction recovered about 50% of the available germanium. Extractability with H<sub>2</sub>SO<sub>4</sub> was inversely proportional to the concentration of the latter, (20 N-H<sub>2</sub>SO<sub>4</sub> extracted 64.5% Ge, while 0.05 N-H<sub>2</sub>SO<sub>4</sub> gave 96.7% recovery). On the other hand, extractability with HCl increases with increased concentration. Recovery of Ge by means of HNO<sub>3</sub> was not feasible. The separation of Ge by means of HCl from the coarser fly ashes is also described. An addition of HF (in the form of CaF<sub>2</sub>) is recommended to convert the SiO<sub>2</sub> to SiF<sub>4</sub>, which is driven off by heating. Extraction with weakly alkaline solutions was somewhat inferior to processing with dilute acids. In order to obtain additional information about the isolation of germanium from flue dusts, the volatility of germanium dioxide at different temperatures was studied and results are tabulated. It was found that up to 400 °C germanium was not volatile and was

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Z/009/61/000/007/001/004  
E112/E135

Properties of furnace flue dusts ....

assumed to be present as  $\text{GeO}_2$ , easily soluble in alkalies. On the other hand, samples of flue dust, heated under identical conditions, showed poor extractability of Ge by means of dilute sulfuric acid. This is explained by the poor solubility of  $\text{GeO}_2$  in  $\text{H}_2\text{SO}_4$ . It is concluded from laboratory experiments that flue dusts containing 0.3-1.0% Ge present a suitable raw-material for a Czechoslovak germanium recovery industry. Extraction with dilute sulfuric acid or treatment with HCl and distillation as  $\text{GeCl}_4$ , optionally in a stream of HCl, are suggested. The described laboratory methods were utilized for industrial scale production, details of which are to be published later.

There are 7 figures, 12 tables and 12 references: 3 Czech, 7 English and 2 German.

ASSOCIATION: Ústav nerostných surovin, Praha  
(Institute for Mineral Raw-Materials, Prague)

SUBMITTED: January 16, 1961

Card 4/4

S/081/62/000/019/019/053  
B144/B180

AUTHORS: Stovík, Miroslav, Zahradník, Lubomír, Tyroler, Jiří, Vondráková, Zdena, Formanek, Zdenek

TITLE: Production of concentrates of germanium and other trace elements by burning coal in furnace grates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1962, 340, abstract 19K82 (Czechoslovakian patent 99414, April 15, 1961)

TEXT: When coal is burned in furnaces, almost all the Ge is carried away with the finer fractions in the form of volatile compounds. For more complete removal it is suggested that the coal should be burnt in a reducing atmosphere. To this end the entry of primary air from below is restricted to a minimum and that of secondary air above the grate is increased. The amount of Ge compounds adsorbed in the thin fractions then rises to 80% the Ge content of the coal. The combustion gases are led through a cyclone, where the largest particles are separated, and then through an electrostatic filter and a second cyclone. Alternatively, after separating the large particles, the gas is passed through a scrubber, (with either mineral or silic-  
Card 1/2

Production of concentrates ...

3/081/62/000/019/019/053  
B144/B180

cone oil), and then conducted through a hydrocyclone and a centrifuge, where the thin fraction is separated. The wash liquid is continuously recycled. Additions of 2-3% by weight sulfur (pyrite) to the coal promote the formation of volatile Ge compounds ( $\text{GeS}$ ,  $\text{GeS}_2$ ). Diagrams of the process are shown. [Abstracter's note: Complete translation.]

Card 2/2



ZAHRADNIK, Lubomir; FORMANEK, Zdenek; STOVIK, Miroslav; TYROLER, Jiri;  
VONDRAKOVA, Zdena

Refinement of germanium dioxide. Chem prum 12 no.2:60-63 F '62.

1. Ustav nerostnych surovin, Praha.

60

28

A supplement to the directions for carrying out chemical analyses in sugar mills according to standardized methods. Jiri VONDRAK. *Z. Zuckerind. Czechoslovak. Rep.* 57, 39-40(1932); *Listy Cukrovar.* 51, 28, 67. C. A. 26, 614.—For detg. the optimum alk. of the last satn., 25 cc. of a hot unfiltered juice is treated with 8 drops of a 0.01% phenolphthalein and  $\text{CaCl}_2$  soln. (15 g. per 100 cc.) and after shaking well the color is observed after 0.2-0.5 min. At a correct alk. the color should be a dirty pink; a high alk. produces a dark red color, a low alk. leaves the soln. colorless. Larger addns. of  $\text{CaCl}_2$  and a replacement by  $\text{BaCl}_2$  are recommended. Other proposed changes in analyses are discussed.

FRANK MARSH

ASME S.A. METALLURGICAL LITERATURE CLASSIFICATION

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A survey of Czechoslovakian patents related to sugar technology granted or ex-  
piring in 1937 1st Vienna Int'l Fair (Autumn, 31. 180-92(1932). P. 31.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

[illegible]

28

A supplement to the directions for carrying out chemical analyses in sugar mills according to standardized methods. 1st Volume — Zuckerind. Czechoslovak Rep. 37, 38, 40 (1932); 2nd Volume — 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. For obtaining the optimum alkali of the last soln., 25 cc. of a hot unfiltered juice is treated with 5 drops of a 0.01% phenolphthalein and  $\text{CaCl}_2$  soln. (15 g. per 100 cc.) and after shaking well the color is observed after 0.2 to 0.5 min. At a correct alkali, the color should be a dirty pink; a high alkali produces a dark red color, a low alkali leaves the soln. colorless. Larger additions of  $\text{CaCl}_2$  and a replacement by  $\text{BaCl}_2$  are recommended. Other proposed changes in analyses are discussed.

FRANK MARSH



CA

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**Studies in diffusion:** J. H. VON PRÄG, *Listy Cukrovar* 51, 1905, 9. Z. Zuckerind. *Technol.-lab. Rep.* 57, 301 (1905). (241) slices (440 g.) were placed in diffusion cells of a 16-unit battery. The slices were rinsed with distd. H<sub>2</sub>O, diffused with cold H<sub>2</sub>O and finally diffused with H<sub>2</sub>O at 80°. The rinse H<sub>2</sub>O contained 0.6% of the sugar, the cold diffusion 20.5%, the hot diffusion 50.1% and the residual slices 1.8%. On a basis of 100 g. of sugar the rinse H<sub>2</sub>O contained 0.553 g. total N, 0.193 albumin N, 0.0354 ammonia N, 0.139 amide N, 0.119 betaine N, 0.327 P<sub>2</sub>O<sub>5</sub>, 2.7 sulfate ash, 7.7 org. nonsugars and a quotient of 90.0. The cold diffusion soln. showed 0.634 g. total N, 0.196 albumin N, 0.029 N in NH<sub>3</sub>, 0.124 amide N, 7.119 betaine N, 0.277 P<sub>2</sub>O<sub>5</sub>, 2.6 sulfate ash, 7.0 org. nonsugars and a quotient of 91.3. The warm diffusion soln. contained 0.473 g. total N, 0.151 albumin N, 0.015 N as NH<sub>3</sub>, 0.102 amide N, 0.112 betaine N, 0.358 P<sub>2</sub>O<sub>5</sub>, 2.3 sulfate ash, 6.7 org. nonsugars and a quotient of 91.7. The first soln. contained the most ash, total N, NH<sub>3</sub> and NH<sub>4</sub>. About 4 times as much albumin was found in the cold as in the hot diffusion soln. The no. of opened or injured cells on the profile of a slice based on chem. analyses was in the range of 34-41% of the total, a value higher than that obtained by estg. the cells on the cut surface from the cellular dimensions. During diffusion about 33% of the beet juice is obtained by rinsing the contents of injured cells and 66% by a dialysis through the cellular membrane. The purifying influence of diffusion through cell walls has been found comparatively small; the changes in the quotient were very small between the diffused and rinsed juice.

FRANK MARKSH

FRANK BLAKESMITH

#### ALA-LIA METALLURGICAL LITERATURE CLASSIFICATION

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101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

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CPX

A report on the results of a detailed analysis of discharge sugar-mill waters. [18] Yonpa, S. *Islety Chikrowar*, 51, 291-302 (1933).—Discharge water from the settling tank of a sugar mill, outlet of a mixed factory during the raw-sugar digestion, discharge from the presses, washing mills, etc., were evapd. to dryness in 100-400 kg. lots. The dry residue contained sugar 25.5-50.3, ash 11.3-41.5, org. non sugars 25.35-37.85 and total N 0.457-1.213%. The distribution of the total N was: albumins 5-65, Nif, 1-5, amides 7-20, amino acids 5-30 and betaine 6-26%. The amino acids may have formed from amides during the evapn. For a comparison the analyses of diffusion liquors, molasses, pressed beet juices and wash waters in the factory at the time the discharge water was collected are given in detail. The distribution of the individual forms of N correspond closely to that of a diffusion juice which has been greatly diluted. The methods used for purifying juices are being tried on the discharge waters. FRANK MARSH

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSING AND PROPERTIES INDEX

78

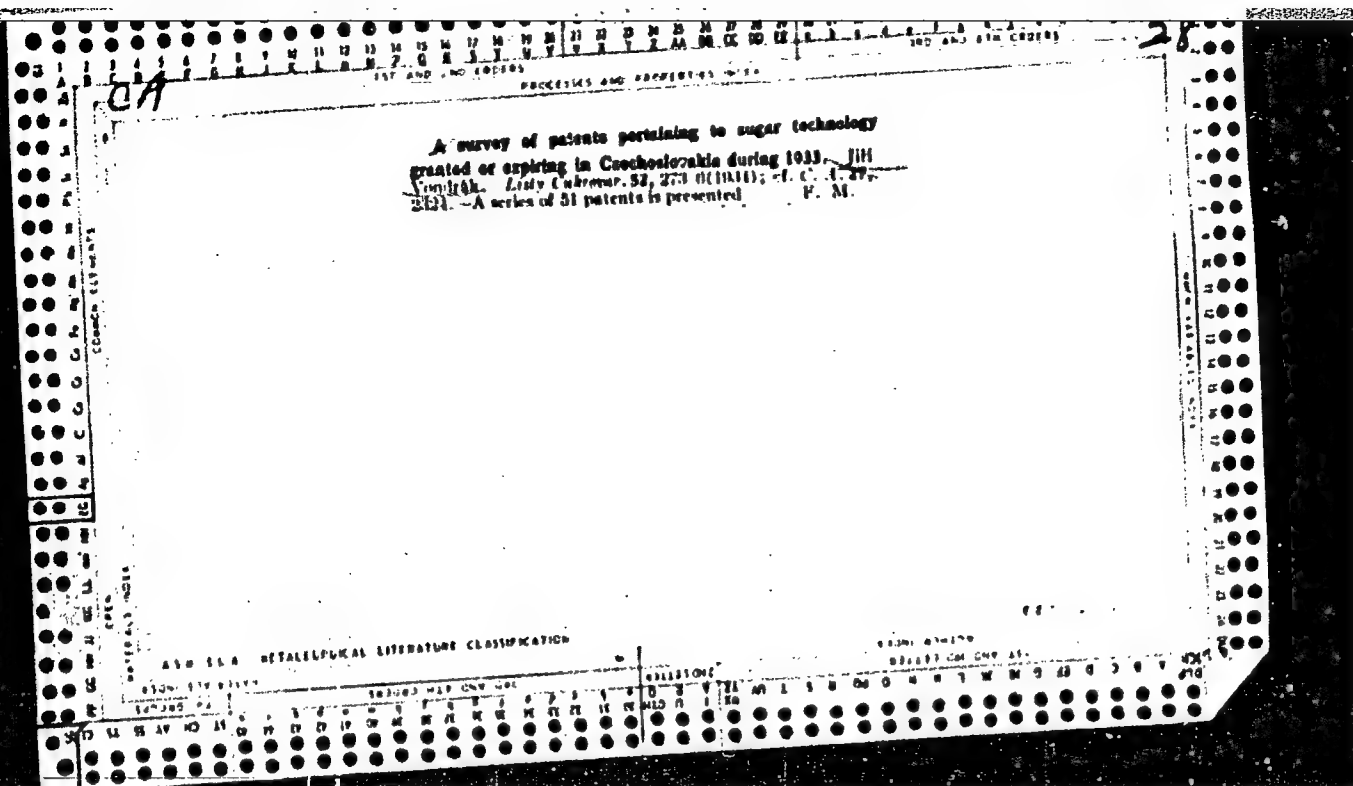
A table for determining invert sugar in the presence of sucrose by using Fehling solution and glass beads. Jiff Vondrák and Miroslav Černý. *Lidský časopis*. 32. 133 B (1933); cf. C. A. 27, 837N.—The Herzfeld method for detg. invert sugar in the presence of sucrose leads to results which vary with the degree of superheating. A temporary modification and tables are presented to be used until an internationally recognized method is adopted. The method calls for an addn. of 5 glass beads with a roughened surface to reduce superheating. Also in Z. *Zuckerind. technol.*, Rep. 58, 300-6 (1934). P. M.

METALLURGICAL LITERATURE CLASSIFICATION

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The significance of the detrimental space in diffusion.

II. Applied findings. J. J. Vondrak and Ermin Pokorny. *Light Cabsion*, 32, 117-21, 123-8 (1933); Z. Zocherind. *Technical*, Rep. 24, 241-5, 249-53, 257-61, 265-8 (1934). - Theoretical computations indicated that the detrimental space in the diffusion cells is extremely blamed for exerting an unfavorable influence upon the concn. of beet juices. Exptl. studies carried out in the Kaptl. Institute and in sugar mills showed that with dead spaces of various shapes and sizes making up 10-45% of the chamber vol. the juices leaving the cells were of a normal concn. These observations led to an increase in the size of the armature which up to the present has been made as small as possible. The resistance in the armature of diffusion batteries is the chief factor which governs the speed with which juices flow in diffusion, and the present small dimensions of the armature do not allow for an increase in the speed of juice flow. Cells with large armatures are described which are to be tried on large runs in the next season. Frank Marsh

ASB-56A METALLURGICAL LITERATURE CLASSIFICATION

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A supplement to the procedures for conducting chemical analyses in sugar establishments according to standardized methods. Jil Vnitrk. Lity (brow, 32, 10 2 (1933)) cf. C. J. 20, 4107. The perm. of solns. and procedures for detg. the sugar content of beets, polarization of sugar solns., analysis of satn. sediments, ash, affination values and invert sugar as adopted by the International Congress for Sugar Analysis, Amsterdam, 1932 are given in detail as well as the reasons for introducing any changes from the methods used in Czechoslovakia. P. M.

ASD SLA DETAILING LITERATURE CLASSIFICATION

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The loss of nutritional elements during the fermentation of sweet slices. *Lift*  
*Yugoslav Lisy Cukrov. 81, 493-5(1933).*—Beets stored in pits showed a loss in  
sugar amounting to 0.000 0.010% per day. When the same beets were mashed only  
0.8% of all sugars remained after 3 days. Whole beets only should be stored, and  
slicing carried out only just before the beets are used to prevent losses in nutritional  
elements. Beets low in sugar content are not affected as severely as good sugar beets.  
Frank Marshall

430.514 DETALLURGICAL LITERATURE CLASSIFICATION

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Supplements to and changes of the methods of chemical analyses in the sugar industry according to standard methods. Jil Vondrák. *Listy Cukrovar. 53, 224*; *Z. Zuckerind. technol. Rep. 30, 30-9(1934)*.—The commission adopted the Ofner direct unmodified lodometric titration method for detg. invert sugar in sugars. Frank March

COMMON ELEMENTS		PROCESSING AND PROPERTIES INDEX	
<p>The injurious spaces in diffusion. <i>J. Vondrák</i>. <i>Časopis pro vědu a techniku</i>, 34, 71-8(1935).—Since those spaces which are occupied by juice and do not contain slices are considered as being detrimental to a normal extn. process, V. presents material balances, math. computations and factory data, to show that these spaces need not exert an unfavorable influence and theoretically may increase the concn. of the juice and may result in an extn. of the slices more complete than normally. V. does not deny that large spaces exert an undesirable influence, for the larger vol. of juice and the faster flow of the liquid are undesirable, but since these factors are compensated by a higher concn. and more complete extn. V. shows that for moderate spaces the last 2 factors may more than compensate for the large vol. and rapid flow and that in such cases the dreaded injurious spaces become an aid in diffusion. Factory exps. confirmed the preceding computations. However, the injurious spaces do not include those regions (due to faulty design) where stagnation exists, dead spaces at the walls of the cells, obstructions between slices due to an uneven packing, and corners not occupied normally by the slices.</p> <p style="text-align: right;">Frank Mareš</p>			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>ca</p> <p>18</p> <p>The international consideration of the question concerning sugar purification. Jiti Vonnák. Z. Zuckerind. (Czechoslovak Rep. 59, 183 4711933). Frank Marsh</p>																			
<p>ASAC-SEA DETAILING LITERATURE CLASSIFICATION</p>										<p>62-1-1-1</p>									
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The first supplement to the fourth edition of the directions for conducting chemical analyses in sugar establishments according to standard methods. Jiri Vondrák. *Československá Rep.* 60, 46 B. The divisions of the expert commission are included in the specifications for sampling beets in the field, for identifying sugar beets from other beets; for detg. the ash in raw sugars from the elec. cond., for sampling molasses, for detg. invert sugar according to the direct and unmodified Omer method, for detg. the detrimental amino N according to the Staněk-Pavlas colorimetric method and for estg. the foam in molasses. Frank Mareš

ADD-SLA METALLURGICAL LITERATURE CLASSIFICATION

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✓ Experiences with the unmodified Omer method for determining the content of invert sugar in commercial sugars. Jitt Vondrák. Z. Zuckerind. Technol. Rep. 60, 57 (1961). See C. A. 29, 1862. F. Maresh

ASACSLA METALLURGICAL LITERATURE CLASSIFICATION

100 AND 1000 CORDS

PROCESSING AND PREPARED INDEX

100 AND 1000 CORDS

Ca

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A report upon preparatory studies leading to the introduction of the Ofner method for determining invert sugar in raw sugar. Jiti Vondrák and Miloš Kminek. *Časopis pro vědu a techniku*, 33, 191-7 (1935); cf. C. A. 28, 87011. A survey of 2300 analyses of 484 samples of raw sugar from 1933-34 is presented. The invert sugar content of the same group of sugar samples was according to the methods: Hersfeld 0.0397% (47.2 mg. Cu), Pick 0.0677% (34.8 mg. Cu), Vondrák-Cerný 0.0581% (39.7 mg. Cu), Ofner short method 0.0445%, and Ofner long method 0.0617%. In frequency-distribution curves the Ofner long method gave the best distribution. When the analytical results were plotted against the actual concn. of invert sugar added to sugar, the Ofner long method gave results which fell on a straight line; the remaining methods showed fluctuations above and below this line over the range 0.03-0.06% invert sugar. Frank March

ASH-55A METALLURGICAL LITERATURE CLASSIFICATION

100 AND 1000 CORDS

100 AND 1000 CORDS

100 AND 1000 CORDS

The second supplement to the fourth edition of Directions for Chemical Analyses in Sugar Mills according to uniform methods. JH Vondrak, *Listy Cukrovar.* 55, 56-60 (1936); Z. Zuckerrind, *Zeitschrift. Rep.* 61, 46-8 (1936); cf C. A. 30, 4347<sup>9</sup>.—The adopted changes, modifications and new procedures are given. Frank Marsh

This image shows a microfilm frame containing a document page. The document has two handwritten annotations: "ca" in the upper left corner and "78" in the upper right corner. The main body of text describes a method for determining invert sugar, attributed to Dr. H. Ofter, and cites a source from the journal "Zuckerindustrie" (Sugar Industry) by H. Yondak, pages 103-9, volume 61, from 1936. It also references "C.A.B. 30, 7804". The author's name, Frank Marsh, is listed at the end of the paragraph. Below the text, there is a section labeled "ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION". The microfilm frame itself features a perforated border with alphanumeric labels along the top, bottom, and sides.

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120 course of the 1940-41 campaign in Bohemia and Moravia. I. The beets, the harvest, and the purification of the juice. J. J. Vondrak. *Liby Cukrov.* 59, 213-20 (1941); cf. C.A. 54, 7641<sup>1</sup>.—Based upon 330 weekly reports from 39 sugar estates, the seasonal av. values were: beet digestion 17.55%, diffusion juice quotient 90.78, maccharization of the heavy liquor 64.30, quotient 94.94, alkyl. 0.061, molasses quotient 66.76, and per cent yield of molasses 1.43. V. presents the av. values for the same estates for the previous decade. The results showed a general improvement over the 3 preceding years. II. Filtration, evaporation, concentration, crystallization, heat, and yield balances. K. Sanders. *Ibid.* 221-33; cf. C.A. 39, 5108<sup>8</sup>.—The av. values resembled those of the 1939-40 season and deviated less than a per cent from the preceding year. Frank Mareš

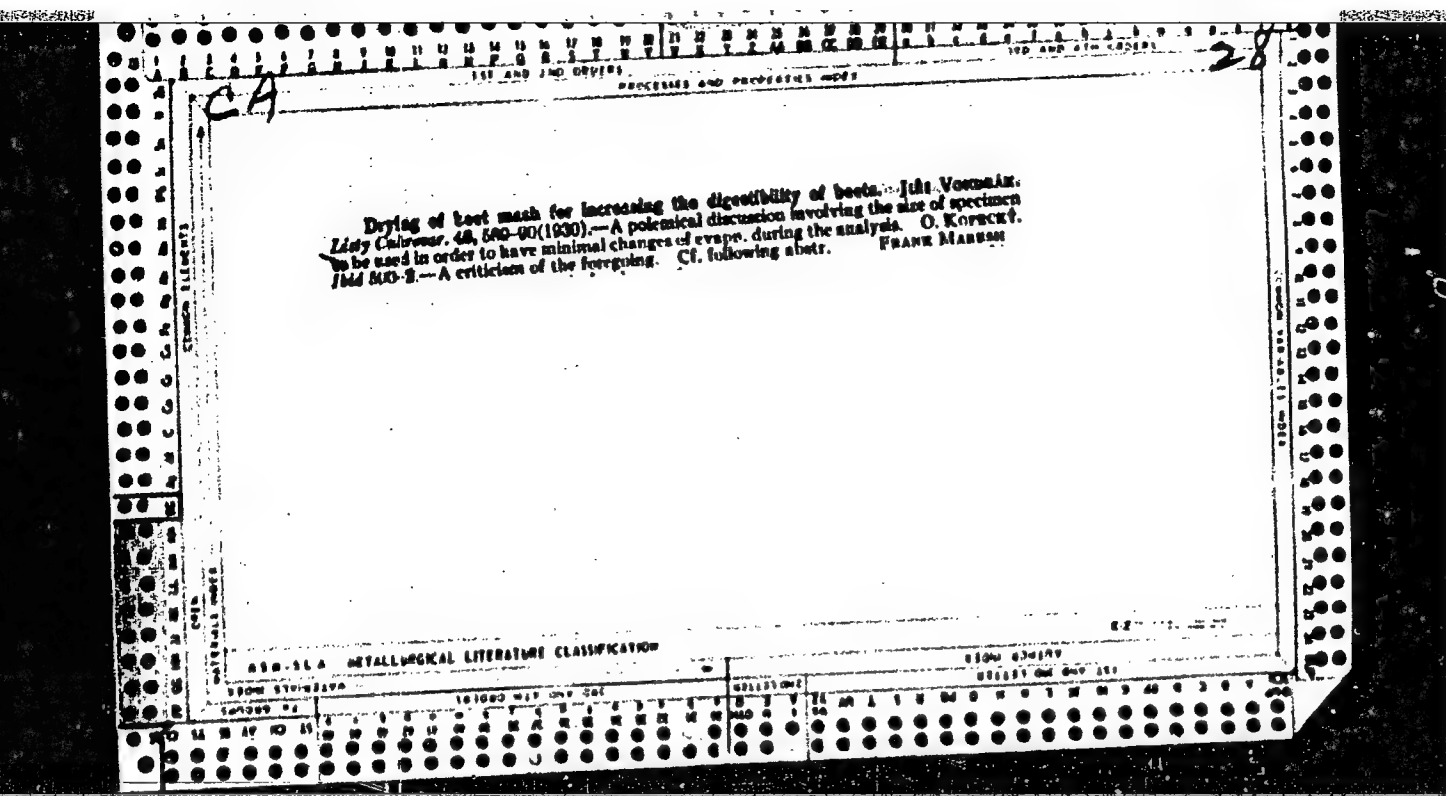
The development of views concerning the nitrogen constituents in sugar beets and in sugar products. (J. Von drlik. *Chem. Listy* 33, 119-51 (1938)). In a table V. gives the annual N content of beet juices (total N, amine N, injurious N in the form of amines, total injurious N) in Czechoslovakia for the yrs. 1908-1938. By a careful selection of beet seeds, particularly during the past 20 years, the content of injurious N in diffusion juices which in the years preceding 1900 ranged 0.284-0.521 g. of N per 100 g. of sugar fell into the range 0.220-0.480 g. during the past decade. In 1932 Andrlík deduced the injurious N (*Listy cukrov.* 21, 540 (1932) (1)) as that N which is not removed by astring. and defecation and which finally enters the molasses; the injurious N was detd. from the total N minus the albumin N, the N as  $\text{NH}_3$ , and a half of the N in the form of amines (i. e., that N in an amine which when removed forms  $\text{NH}_3$ ). From the content of the injurious N it was possible to predict the total quantity of molasses from the particular beets. Since later analyses showed that a large part (about a third) of the injurious N comes from betaine, an inert chem. substance which passes unchanged through all of the processes of sugar manuf., Andrlík view became too rigid and although the injurious N characterized the sugar juices better than the total N characterized it, the injurious N did not measure the reactivity of the N substances in the juices. The systematic annual analyses of the past 20 yrs. have shown a const. relation between the amino acid content of juices and the

stability or the fall of the silky. in the campaign; it has been possible to predict the course of the campaign from the preliminary amino acid detns. Recent analyses indicate that the amino acids are not the only reactive bodies, for the living beet is able to transform amino acids into for the living beet is able to transform amino acids into amines and amines into amino acids according to its requirements. The reactions which predominate are glutamine  $\rightarrow$  glutamic acid and asparagine  $\rightarrow$  aspartic acid. In diffusion juices the amines predominate over a small quantity of amino acids, but during astring. much of the amine N is cleaved and the remainder of the mol. is left as an alk. (principally Ca) salt of amino acids; the amino acids predominate over the amines in said. juices. The rapid colorimetric Staněk-Pavlas method (C. A. 29, 1217) depends upon the fact that glutamine, glutamic acid, asparagine and aspartic acid in Cu acetate form a blue substance whose color is an index of the reactive amino acid N; the N which can be removed as  $\text{NH}_3$  does not participate in the reaction. The N indicated by this test and expressed as "Blue nos." has been called the injurious N by Staněk; the correctness of this view has been confirmed by field and lab. tests during the past 2 seasons.

Frank Mareš



**The drying of beet mash for analysis.** *J. H. Young, Jr., Livestock, 46, 447-51 (1930).*—The drying of the mash occurs on the surface of large batches. Large specimens must be collected for the ratio of surface to vol. becomes smaller. A universal correction factor cannot be detd. The grinding has to be carried out rapidly in order to have no effect upon sugar content. FRANK MARSH



1ST AND 2ND SERIES		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH SERIES	
<p>Further studies on the influence of packing on extracted and fermented beet slices. Jiti Vondra, <i>Lilij</i> <i>Cutrovic</i>, 33, 9-14(1930); cf. C. A. 20, 7377. In 22 pairs of beet pits on 6 different estates, V. deposited fermented, cold, beet slices in a loose condition (I) and in a firmly packed state (II). After 8 months on estate A, I lost 30% of their wt, 45% of their dry substance, 61% of their pulp and 35% of their total N; the corresponding well-packed beets lost 21.7% of their wt, 24% of their dry substance, 30% of their pulp and 11% of their total N. In 21 out of 22 pits I lost more of their wt. than II. The disappearance of nutritional elements was not consistent: in 7 pits I lost less of their nutritional elements than II, in 14 pits I lost more than the controls, and in 1 pit the changes were equal for both types of packing. However, II retained their structure and appearance, contained less slime and were lower in solid and in liquid acids than I. The changes depend upon the degree of ventilation in the beet masses, but since fermentation is a complicated process, the firm packing of beet slices into pits is recommended only on those estates on which it proved beneficial. P. Marrah.</p>					
<p>ATM-11A METALLOGICAL LITERATURE CLASSIFICATION</p>					
<p>100% 100% 100% 100% 100% 100%</p>					

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Now attempts to inoculate extracted beet slices with lactic acid-producing organisms. In Yamalov, *Lary* (Abstract, 33, 45 (1934); *Er-Gilovind, Lachnolov* Rep. 30, 205-72 (1935).--Throughout the 1932-33 and 1933-34 seasons V. analyzed extd. beet slices which had been inoculated with lactic acid-forming organisms. For a control supply, slices were produced for 3 days without inoculation. Beet slices inoculated during regular intervals throughout the campaign and the uninoculated control slices were buried in identical pits and opened 3 and 7 months later. In those establishments which had an abundance of fresh water the inoculated slices revealed a smaller loss of dry substance than the uninoculated slices. In an establishment which returned, filtered and reused the running water, the inoculated slices showed a greater loss of dry substance than the uninoculated slices. The principal losses in dry substance occurred during the early stages of storage, while one strain of bacteria was

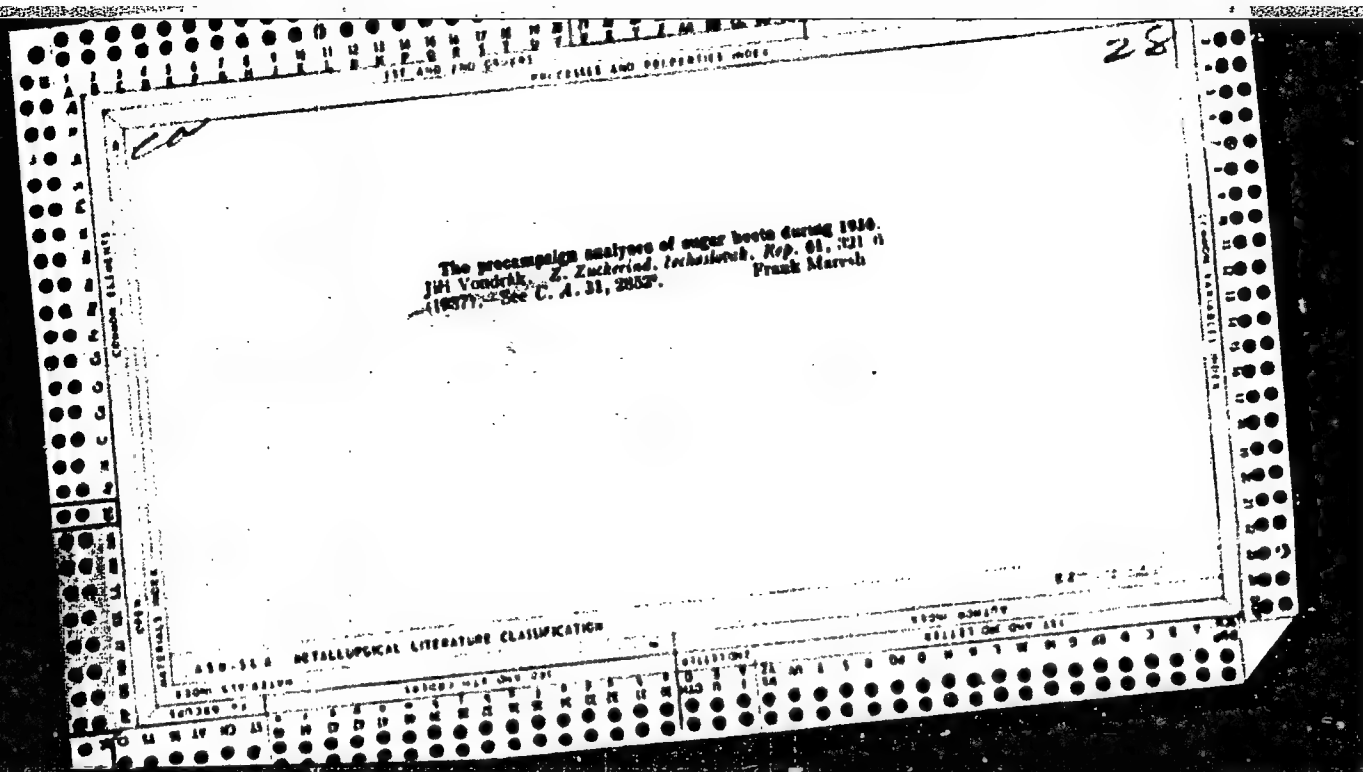
gaining supremacy over the remaining ones. An abundant water supply indicates relatively sterile slices, and an inoculation with a strain of bacteria gives the strain an uncontested field for growing and for developing the conditions for its optimum expansion. In the plants in which the water is recirculated through the beet slices they are infected by many local brands of bacteria. When they are inoculated with a new strain, a struggle for supremacy follows until one strain dominates the others and develops a medium for optimal expansion. P. M.

ASD-55A METALLURGICAL LITERATURE CLASSIFICATION

Now attempts to inoculate extracted beet slices with lactic acid-producing organisms. (P. M. Vasilukh. *Trudy* (Moscow, 19, 40 M (1934); L. Zakharenko. *Trudy* (Moscow, 19, 205-72 (1934)).) Throughout the 1933-33 and 1933-34 seasons V. analysed etid. beet slices which had been inoculated with lactic acid-forming organisms. For a control supply, slices were produced for 3 days without inoculation. Beet slices inoculated during regular intervals throughout the campaign and the uninoculated control slices were buried in identical pits and opened 5 and 7 months later. In those establishments which had an abundance of fresh water the inoculated slices revealed a smaller loss of dry substance than the uninoculated slices. In an establishment which returned, altered and reused the running water, the inoculated slices showed a greater loss of dry substance than the uninoculated slices. The principal losses in dry substance occurred during the early stages of storage, while one strain of bacteria was

gaining supremacy over the remaining ones. An abundant water supply indicates relatively sterile slices, and an inoculation with a strain of bacteria gives the strain an uncontested field for growing and for developing the conditions for its optimum expansion. In the plants in which the water is recirculated through the beet slices they are infected by many local brands of bacteria. When they are inoculated with a new strain, a struggle for supremacy follows until one strain dominates the others and develops a medium for optimal expansion. P. M.

030-354 METALLURGICAL LITERATURE CLASSIFICATION







The precampaign analyses of beets in 1936. JUN 1  
 Vondrik-Listy Chirvor. 23, 105-9(1936).—Twelve beet  
 samples from representative estates were analyzed at  
 the exptl. institute. The av. amino acid N was 0.115 g.  
 per 100 g. of sugar, the av. injurious amino acid N no.  
 was 29.5, and the alkyl. of a carbonate ash was 1.044 g.  
 K<sub>2</sub>O per 100 g. of sugar. On the basis of these values a  
 stable alkyl. was predicted for the season. Tables give the  
 content of ammonia N, N pptd. by Hg acetate and soda,  
 amine N, injurious amino acid N according to Vondrik  
 and Stanik-Pavlas methods, elec. cond. of 0.5 N and 1.0  
 N digestion juices, and av. values for previous seasons.  
 The analyses show the reliability of the colorimetric  
 Stanik-Pavlas procedure during a wet season. F. M.

1ST AND 2ND SECTIONS		PROCESSES AND PROPERTIES INDEX		SUBS. LAB. FILE NO.	
<div style="position: absolute; top: 10px; left: 10px; font-size: 2em; font-family: cursive;">66</div>				28	
<p>A preliminary report on the course of the manufacture of beet sugar. Jilt Von-Duhn. <i>Licht Cukrovcar</i>. 31, 42; <i>Z. Zuckerind. Cechoslovak. Rep.</i> 37, 48(1932).--Samples of beets from 17 different localities during Sept. 20-23, 1932, showed 16.06-20.03% (av. 18.1) sucrose and 131-306 (av. 222) mg. amide N per 100 g. of sugar. On the basis of a high amide N (exceeding 143 mg. amide N per 100 g. of sugar), a decrease in the alkyl. of beet juices and a high Ca content are to be expected. The indications point to a smooth evapn., easy crystn. of the sugar and a complete extra. of molasses.</p> <p style="text-align: right;">FRANK MARSH</p>					
ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION					
FROM SYNOPTIC		FROM SUMMARY			
SYNOPSIS	SUMMARY	REMARKS		CLASSIFY ON ONLY ONE	

CA 28

1st and 2nd Orders  
PROCESSES AND PROPERTIES INDEX  
COMMON ELEMENTS  
COMMON VARIABLE INDEX

A report concerning the precampaign analyses of beets performed by the Experimental Institute of the Czechoslovakian Sugar Industry in Prague. J. Vondrik and Miroslav Kozisek. *Listy Cukrovar.* 38, 55-5 (1934). In certain districts the amide N ranged 150-308 mg. per 100 g. sugar. Since this is above the ten-yr. av., the plants in the districts are warned to anticipate a rapid decrease in alk. during the process of sugar extn. Frank Marsh

ASTM A 1.1 METALLURGICAL LITERATURE CLASSIFICATION  
1st and 2nd Orders  
COMMON VARIABLE INDEX

28

A report on the composition of beets and juices from the 1933-34 campaign. JIM YONDAK. Listy Cakewar. 32, 470-63(1934).—A dry season with an av. pptn. of 285 mm. affected the chem. compo. of liquors. A series of 21 beet samples collected from the entire country during the pre-campaign period gave an av. of 240 mg. amide N per 100 g. of sugar. From this high value, the sugar establishments of sugar were warned of a decreasing alk., calcification of the liquors and abnormal quotients. The prediction was realized only in an av. no. of the established plants, for the campaign value of amide N was 170 mg. Diffusion juices contained an av. of total N 0.504, albumin N 0.82, ammoniacal N 0.34, betaine N 0.167, injurious N 0.380, K<sub>2</sub>O 0.080, Na<sub>2</sub>O 0.094, P<sub>2</sub>O<sub>5</sub> 0.254, nonsugars 9.28%, S ash

(all of the ash which can be oxidized to sulfate, expressed as a 0.1 N soln.) 2.35, a saccharization of 18.25, polarization 16.70 and a quotient 91.5. The heavy liquors showed a saccharization 00.7, polarization 63.0, quotient 94.5, alk., as CaO 0.1372, Ca salts as CaO 0.033, nonsugars 5.90%, S ash 1.90, ratio of org. nonsugars to ash 3.07, total N 0.409, albumin N 00.04, ammoniacal N 0.002, amide N 0.072, betaine N 0.164 and injurious N 0.366%. The dry season is held responsible for the low K<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub> and Na<sub>2</sub>O. In comparing the annual analyses during the preceding 14 yr., it becomes apparent that the economical fertilization program has compelled the plants to replace some of the K by Na, and that the soil is being progressively depleted of its minerals. Frank Marsh.

ASB-SLA METALLURGICAL LITERATURE  
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A report of the course of the campaign of 1931-32 in Czechoslovakia. I. Berth,  
yields and purifying liquors. Jiskra Vonnacik. Listy Chemicek. 50, 281-6; Z. Zuckerind.  
tschechoslowak. Rep. 54, 357-64 (1932); cf. C. A., 25, 4720. II. Filtration, digestion,  
crystallization, heat and yield balances. K. SANDERA. Ibid 240-94; cf. C. A. 25,  
4731.

*78*

ASSOCIATE METALLURGICAL LITERATURE CLASSIFICATION

SECTION DIVISION

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28

UP

A report on the course of the 1932-33 campaign in Czechoslovakia; beets, extraction and purifying of juices. Jiri VODNANEC, *Daily Culture*, 31, 240-241 (1933). Weekly reports from 101 sugar establishments showed the crops yielded 290 quintals per hectare in Bohemia, 221 in Moravia and 252 in Slovakia. The sugar contents per beet root were 18.18, 14.91 and 18.01%, resp. Most of the establishments used a 16-unit diffusion battery and an initial temp. of 78-79°. About half of the establishments used an initial CaO concn. of 0.2-0.3%, the remainder 0.1-0.2%. The av. quotient was 10.67.

FRANK MARSH

ASU-224 METALLURGICAL LITERATURE CLASSIFICATION

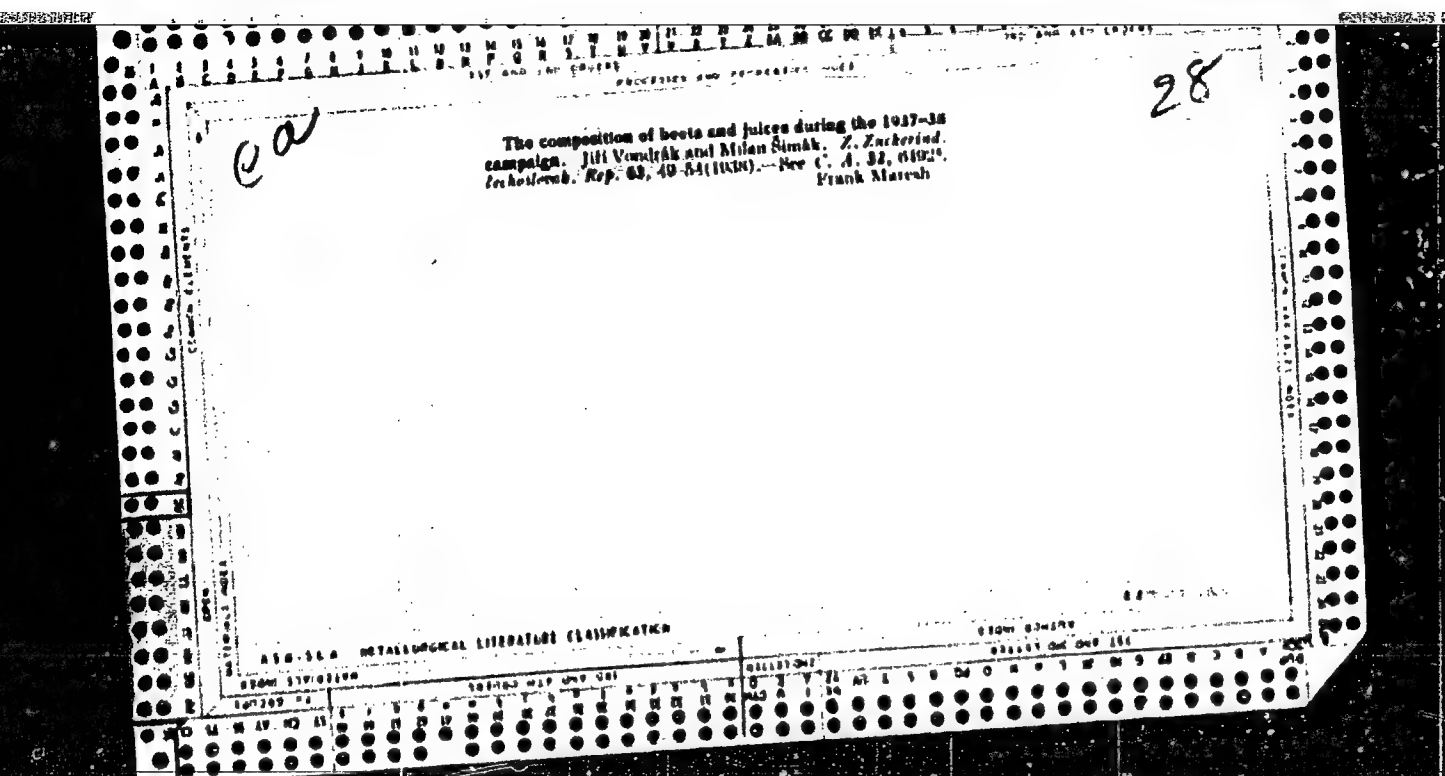
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1ST AND 2ND GROUPS		PROCESSING AND PROPERTY NOTES		1ST AND 2ND GROUPS																																																																																																																									
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<p> <i>CP</i>             A report upon the course of the 1934-35 campaign in            Czechoslovakia. Jiri Vondrik, <i>Listy Cechy</i>, 13,            315-23; Z. Zecherindrichova, <i>Rep.</i> 39, 321-6, 329-32            (1935); cf. C. A. 39, 4199. During the campaign, 104            sugar factories sent weekly reports to the expel. institute,            where a statistical av. of 373 reports showed: sugar concn.            18.12%, quotient for the diffusion juice 80.34, sacchariza-            tion of the heavy liquor 63.14, quotient of the heavy liquor            04.66, alky. of the heavy liquor 0.041, molasses quotient            63.76, and percentage of molasses per raw beet 2.07. The            yearly averages of the 1934-35 decade are presented.            The yield of roots was 270 q. per ha. for a pptn. of 318 mm.            during the vegetative period. The total lime addn. was            1.97%. Frequency-distribution curves are given for the            preceding analyses. Frank Mareš         </p>																																																																																																																													
<p>           ASM-314 DETAILING LITERATURE CLASSIFICATION         </p>																																																																																																																													
<table border="1"> <thead> <tr> <th colspan="10">1ST GROUP</th> <th colspan="10">2ND GROUP</th> <th colspan="10">3RD GROUP</th> <th colspan="10">4TH GROUP</th> </tr> <tr> <th colspan="10">1</th> <th colspan="10">2</th> <th colspan="10">3</th> <th colspan="10">4</th> </tr> </thead> <tbody> <tr> <td colspan="10"></td> <td colspan="10"></td> <td colspan="10"></td> <td colspan="10"></td> </tr> </tbody> </table>						1ST GROUP										2ND GROUP										3RD GROUP										4TH GROUP										1										2										3										4																																																	
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The course of the 1922-1934 campaign in Czechoslovakia. I. The boots, the extraction and the clarification of the juices. J.H. Vondelk. E. Zachariad. Inchevskov. Rep. 80, 97-9; 103-9(1934).—See C. A. 28, 6007.  
II. Filtration, digestion, crystallization, heat balances and composition. K. Sandera. Ibid. 112-15, 121-7.—  
See C. A. 28, 6008.  
Frank Marsh

ASA SIA METALLURGICAL LITERATURE CLASSIFICATION  
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BRISTOL ONE QW 211  
BRISTOL ONE QW 211

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78

The course of the 1915-16 campaign in Czechoslovakia: the beets and the preparation and clarification of the juice. JMI Vondrák. *Lišty Cukrov.* 54, 205-14(1936); Z. Zúšková. *Czechoslovak Rep.* 60, 325-37; cf. C. A. 29, 4100. — His weekly reports from 101 sugar establishments are analyzed statistically. The av. sugar concn. (17.88%) was 0.37% below the 10-yr. av. of 18.25%. The quotient for diffusion liquor was 90.43; for heavy liquor, 94.60; the 10-yr. av. for diffusion liquor was 90.80; for heavy liquors, 94.68. The operations during diffusion and satm. were simple, for the chief troubles were due to muddy beets and a decrease of the alkali. Eight statistical tables are given in detail. Frank Marech

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The course of the 1936-37 campaign in Czechoslovakia:  
the beet, the harvest and the purification of the juice.  
[H. Vondrák]—A. Zuckerkind. *Technoslovák. Rep.* 61, 377-84,  
397-9(1937).—See C. A. 31, 8190'. Frank Marrah

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

*Co*

The course of the 1937-38 campaign in Czechoslovakia.

I. The beets, the harvest and the purification of juices.

*Jiti Vondrák. Listy cukrov. 56, 261-8, 269-72 (1938);*

*Z. Zuckorind. Lachodoush. Rep. 62, 305-19.*—Weekly reports from 111 sugar establishments (out of a total of 114) analyzed statistically revealed a wet season with an av. pptn. of 446 mm. from April through Oct. which lead to large beets with an av. sugar concn. of 17.12% (lowest 14.50; highest 18.97%). Compared to the annual averages for the preceding 13 yrs. the present pptn. was the highest over this period; the sugar concn. was the lowest. The beets were very fragile, yielding slices which demanded a large volume of extrn. liquid and which left a small residue of poor quality. For the diffusion juice the av. quotient was 90.51, the saccharization 16.81, the polarization 15.23. For the light juices the av. saccharization was 15.88, the polarization 14.92. For the heavy liquors the saccharization was 64.17, the quotient

94.88, and the alk. 0.057. The molasses had a quotient of 66.13 and a yield of 1.55%. Dtd. by the Staněk-Pavlas method the av. amino acid no. was 24.6 (min. 15, max. 45) and agreed with such factors as permanent alk. and const. compn. of the beets. Undigested half normal beet juices showed an av. elec. cond. of 41.8 units on a Sander conductivity meter (min. 37.7, max. 47.7).

II. The filtration, the evaporation, concentration, crystallization, yield and heat balance. *K. Sander. Listy cukrov. 56, 273-88, 296 (1938);* *Z. Zuckorind. Lachodoush. Rep. 62, 321-8, 337-40.*—In 16 tables, 4 diagrams and 12 summaries S. reveals that the av. raw sugar rendement was 90.54 (max. 95.80), the raw-sugar ash was 0.94 (min. 0.53, max. 1.63), the sugar in the sediment was 0.80 (min. 0.23, max. 3.30), the accountable losses were 0.53% (max. 1.10), the unaccountable losses were 0.49% (max. 1.39), and the total losses were 1.02% (max. 2.18). The chem. difficulties and abnormalities encountered during filtration, satn. and evapn. are reported individually together with remedies and notes. Geographically as one proceeds from the western tip of Czechoslovakia to the eastern tip, the consumption of coal per unit of sugar rises regularly while the yield of sugar per unit wt. of beet root decreases linearly.

Frank Marsh

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

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Study on the electrochemical production of chlorine and soda.  
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1. Institute of Inorganic Chemistry, Czechoslovak Academy of  
Sciences, Prague.

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~~Polish exhibition of railroad cars on Poznan Fair.~~ Zel dep tech  
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Production of chemically hardened cores for iron castings in the Stalingrad Plant of the CKD Works. p. 299.

SLEVARENSTVI. (Ministerstvo tezkého strojírenství a Československá vědecká technická společnost pro hnutí a slevarenství) Praha, Czechoslovakia.  
Vol. 7, no. 7, June 1959

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Dec., 1959 Uncl.

KOUTSKY, Jaroslav; VONDRAK, Zdonek; CHLOUPKOVA, Karla; MATHEJCEK, Valdimir

Autonomic profile of schizophrenia, Cns. lek. cesk. 97 no.30:  
938-943 18 July 58.

1. Stani lecebna psychiatricka, Jihlava, red. prim. Dr. Vilem Kotina.  
J. K., Jihlava, Dlouha stezka I.  
(SCHIZOPHRENIA, physiol.  
autonomic NS (Cz))  
(AUTONOMIC NERVOUS SYSTEM, in var. dis.  
schizophrenia (Cz))

Vondrak, Z.

Further development and improvement of the "Days for New Technology" in the building industry. p. 468. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 20, Nov. 1954.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

KOUTSKY, Jaroslav; VONDRAK, Zdenek

Autonomic system in neurotic and normal persons. Cas. lek.  
cesk. 46 no.10:303-307 8 Mar 57.

1. Statni psychiatricka lecebna Jihlava, prim. Dr.  
Vilem Kotina, J. K., Jihlava, Dlouha stezka 1.

(AUTONOMIC NERVOUS SYSTEM, in var. dis.

neurosis, comparison with normal persons (Cz))

(NEUROSES, physiol.

autonomic NS, comparison with normal persons (Cz))

VONDRAK, Z.

Modern Technology Days. p. 253.  
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Nov. 1955, Uncl.

VCHORAKOVA.

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SO: East European Accessions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress

VONDRAKOVA, Milena, inz.; BABUREK, Jiri, inz.

Effect of mineralogical composition on the technological properties of paper coating kaolins. Papir a celuloza 19 no.2:45-48 F'64.

1. Vyzkurny ustav papiru a celulosy, pracoviste Praha (for Vondrakova). 2. Ustav keramiky a keramickych surovin, Karlovy Vary (for Baburek).



VONDRAKOVA, Milena, inz.

~~Preparation of a cellulose fiber replica for electron microscopes.~~

Preparation of a cellulose fiber replica for electron microscopes.  
Sber cel pap 8:53-69 '63.

VONDRAKOVA, M., inz.

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M.Vondrakova. Papir a celulosa 18 no.1:24 Ja '63.

S/081/63/000/001/048/061  
B144/B186

AUTHORS: Tyroler, Jiří, Formánek, Zdeněk, Vondráková, Zdena,  
Zahradník, Lubomír, Štovík, Miroslav

TITLE: Production of pure germanium dioxide from germanium  
concentrates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1963, 347, abstract  
1L38 (Czechosl. patent 101148, October 15, 1961)

TEXT: Ge concentrates are distilled continuously with concentrated HCl  
(ratio 1 : 1 - 2) with simultaneous bubbling of  $\text{Cl}_2$  (gas) through the  
solution or addition of oxidants ( $\text{K}_2\text{Cr}_2\text{O}_7 + \text{H}_2\text{SO}_4$ ). The  $\text{GeCl}_4$  vapors  
together with HCl, vapors  $\text{Cl}_2$  and impurities are washed out of the gas  
mixture by organic solvents ( $\text{CCl}_4$ ); then, the  $\text{GeCl}_4$  dissolved in the  
organic solvent is washed with HCl (acid) and hydrolized. Example. The  
apparatus comprises 2 containers with agitators of 70 l capacity (the  
mixture is tapped from one container, while at the same time the other  
Card 1/2

Production of pure germanium ...

S/081/63/000/001/048/061 ~  
B144/B186

tank is filled), a metering pump, a cooking boiler, a foam separator and an absorber. In the containers, the mixture of 25-30 kg concentrate and 50 kg HCl (acid) is prepared. The absorber is filled with  $\text{CCl}_4$ . The operation of the metering pump and the heating of the boiler is controlled in such a way that the foam entering the separator has a temperature of  $100^\circ\text{C}$ . From the separator the suspension is drained-off to waste, but the vapors are led into the absorber, from which  $\text{GeCl}_4$  dissolved in  $\text{CCl}_4$  is drawn off intermittently or continuously and hydrolized thrice with distilled water. The product contains 0.005 - 2% As and is a suitable raw material for semiconductors. [Abstracter's note: Complete translation.]

Card 2/2

VONDRASEK, Bohumil

SURNAME, Given Names

Country: Czechoslovakia

(3)

Academic Degrees:

Affiliation: Chair of Nutrition and Veterinary Dietetics, Veterinary College (Katedra  
Vyzivy a dietetiky veterinarny fakulty VSZ) Brno /Chief Jaroslav KABRT/

Source: Prague, Sbornik CSAZV Veterinarni Medicina, Vol 6(34), No 8, Aug 61; pp 631-638

Data: "Study of Volatile Nitrogenous Bases on Wheat Feeds"

VESELY, Zdenek; DVM

✓JELINKOVA, Vera; graduate veterinarian

✓VONDRASEK, Bohumil; graduate veterinarian

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PROCESSES AND PROPERTIES INDEX

CH

Colloid-chemical methods in drug stores and laboratories. J. VONDRASEK, *Mag.*  
 per Gyógyászati. Társaság Értékeit 7, 80-72(1931).—An address. S. U. de F.

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Materials Index

ASS-51.4 METALLURGICAL LITERATURE CLASSIFICATION

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VONDRASEK, J.

Anchoring of subsequently strained prestressed-concrete elements in  
Czechoslovakia. p. 479.

POZEMNI STAVBY. (Ministerstvo stavebnictví) Praha, Czechoslovakia, Vol. (1)  
no. 9, (September) 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 11,  
November 1959.

uncl.

VONDRASEK, J.

The handling of lumber from the point of view of the lumber technology. p. 201.  
(SBORNIK RADA LESNICTVI. Praha) (Vol. 30, no. 3, Mar. 1957)

SO: Monthly List of Eastern European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.



"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860810007-0

Preparation of a isopropyl derivative of tetrahydrocannabinol (THC) from 0.14 g aniline was carried out as follows:  
1. A solution of 0.14 g aniline in 10 ml of benzene was added to a solution of 0.14 g of PBr<sub>3</sub> in 10 ml of benzene. The mixture was stirred for 1 hour at 0°. The 1st drop of PBr<sub>3</sub> solution was added to the benzene solution.

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860810007-0"

1ST AND 2ND EDITION		PROCESSOR AND PROPERTIES INDEX		100 ADD 2TH EDITION	
<div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 2em; font-weight: bold;">CA</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 2em; font-weight: bold;">10</div> <div style="position: absolute; top: 50px; left: 50px; border: 1px solid black; padding: 5px;"> <p>Preparation of a tetrazole derivative of triformylcholic acid. Jozsef Hladick and Miloslav Vondracek (Charles Univ., Prague, Czechoslovakia). <i>Chem. Abstr.</i> 22, 197-201 (1947).—The combination of cholic acid with a tetrazole compd. was studied. Triformylcholic acid was converted through its chloride by the Rosenmund method into the aldehyde (I); the 1st fraction m. 96°, 2nd fraction m. 110°. I (1 g.) was heated 7 hrs. and brought to a boil on a water bath with 0.5 g. PhNIINi<sub>2</sub>, HCl, 0.5 g. NaOAc, 3 ml. H<sub>2</sub>O, and 10 ml. ethanol. After the ethanol was distd. off, the residue was shaken with N HCl, washed with H<sub>2</sub>O, and twice crystd. from ethanol to give the monohydrazone (II), m. 158°. II (0.85 g.) was dissolved in 10 ml. alc., 2 g. NaOAc, 3 ml. H<sub>2</sub>O added, and PhN<sub>3</sub>Cl, freshly prepd. from 0.1 g. aniline, was added dropwise at 0°. The 1st 10 ml. of N<sub>2</sub>Cl changed the soln. to a deep yellow color. The soln. was left standing 2 hrs. at 5°, then 200 ml. cold H<sub>2</sub>O added, and the soln. sepd. from the deep red, oily N,N'-diphenyl-5-triformylcholyformazan (III). III (0.5 g.) in 10 ml. o-v CHCl<sub>3</sub> was slowly dropped into a soln. of the theoretical amt. of Pb(OAc)<sub>2</sub> (the deep red color changes), the soln. left standing 0.5 hour, 20 ml. alc. added, and the lead pptd. by HCl. After sepn. of the CHCl<sub>3</sub> and alc. solus. and evapn. of the alc., the pale-yellow, oily 2,3-diphenyl-5-triformylcholytetrazolium chloride (IV, R = triformylmorcholy), was obtained.</p> <div style="text-align: center; margin: 10px 0;"> <math display="block">  \begin{array}{c}  \text{RC}-\text{N}-\text{N}-\text{C}_6\text{H}_5 \\    \\  \text{N}-\text{N}-\text{Cl} \quad (\text{IV}) \\    \\  \text{C}_6\text{H}_5  \end{array}  </math> </div> <p style="text-align: right; margin-right: 50px;">Jan Mlicka</p> </div> </div>					
<div style="display: flex; justify-content: space-between;"> <div> <p>ASAC SEA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>STONY BROOK</p> </div> <div> <p>STONY BROOK</p> <p>STONY BROOK</p> </div> </div>					
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3c

PROCEDURE AND PROPERTIES

Bismuth sulphates. B. SKRAMOVSKY and O. VONDRAS. (Coll. Czech. Chem. Comm., 1937, 8, 339-344).—The prep. of the compounds  $\text{Bi}(\text{OH})\text{SO}_4 \cdot 4\text{H}_2\text{O}$ ,  $\text{Bi}(\text{OH})\text{SO}_4 \cdot \text{Bi}_2(\text{SO}_4)_3 \cdot 7\text{H}_2\text{O}$ , and  $\text{Bi}_2\text{H}(\text{SO}_4)_3 \cdot 6\text{H}_2\text{O}$  is described and the existence of  $\text{Bi}(\text{OH})\text{SO}_4 \cdot \text{H}_2\text{O}$ ,  $\text{Bi}_2(\text{SO}_4)_3 \cdot 3\text{H}_2\text{O}$ ,  $\text{BiH}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$ , and  $\text{BiH}(\text{SO}_4)_2 \cdot 3\text{H}_2\text{O}$  confirmed. E. S. H.

2-1

ASAC 11.4 METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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*ca*

6

Homologous double alkali bisulfates. S. Skrzyn-  
ovskiy and O. Vondráček. *Czechoslovak Literature*,  
17, 594-595(1977). There were found the following ho-  
mologous double sulfates:  $KLi(SO_4)_2$ ,  $KRb(SO_4)_2$ ,  $KNH_4$   
 $(SO_4)_2$  and  $KLi(SO_4)_2$ . To this group of compounds there  
can be added the compound  $KLi(SO_4)_2(NO_3)$ .

V. D. Karyenko

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

6

Study of the sulfates of bismuth. S. Skramovskiy and O. Vondrichok. *Collection Czechoslov. Chem. Commun.* 9, 329-44 (1937).—By treating basic bismuth nitrate with 67%  $H_2SO_4$  a new salt,  $Bi(OH)SO_4$ , was prepd. In dil. acid  $Bi(OH)SO_4 \cdot H_2O$  formed. In more concd. acid  $BiH(SO_4)_2 \cdot 3H_2O$  formed. Under other conditions 2 new salts,  $Bi(OH)SO_4 \cdot 4H_2O$  and  $BiH(SO_4)_2 \cdot 6H_2O$ , and 3 salts previously described,  $Bi_2(SO_4)_3 \cdot 3H_2O$ ,  $Bi_2(SO_4)_3 \cdot 7H_2O$  and  $BiH(SO_4)_2 \cdot 11H_2O$ , were prepd. The acid concn., the temp. and the exposure to air detd. the type of salt obtained. Photomicrographs of the salts are given. Amy LeVesconte

ASAC-56A METALLURGICAL LITERATURE CLASSIFICATION

Double sulfates of bismuth and alkali metals. St.  
Saramovsky and O. Vondráček. Collection Czechoslov.  
Chem. Comm. 10, 443 (1967). See C. A. 52, 1294.  
M. W. D.

Double sulphates of bismuth and alkali metals.  
 S. SKRAMOVSKÝ and O. VOUGLAK (Czech. Chem. Comm., 1934, 10, 443-452).—The prep. of the compounds  $K_2Bi_2(SO_4)_6$ ,  $K_2Bi_2(SO_4)_5$ ,  $(NH_4)_2Bi_2(SO_4)_6$ , and  $K_2Bi_2(SO_4)_5(NO_3)_2$  is described and the existence of  $KBi(SO_4)_3$ ,  $K_2Bi_2(SO_4)_5$  and  $NH_4Bi(SO_4)_3$  confirmed. The unstable, hygroscopic additive compounds  $KBi(SO_4)_3 \cdot 2HCl$ ,  $K_2Bi_2(SO_4)_5 \cdot 4HCl$ , and  $K_2Bi_2(SO_4)_5 \cdot 2HCl$  have been prepared, showing the co-ordination no. of Bi to be 4 in the original compounds. F. H.

COUNTRY : CZECHOSLOVAKIA H  
CATEGORY : Chemical Technology. Chemical Products and Their  
Applications. Pharmaceuticals. Vitamins. Antibiotics  
ABR. JOUR. : RZhKhim., No 19, 1959, No. 68215  
AUTHOR : Vondrasek, O.  
INSTITUTE :  
TITLE : Metacholiniumbromide  
ORIG. PUB. : Ceskosl. farm., 1958, 7, No7, 418-420

ABSTRACT : An article dealing with pharmaceutical project  
that covers  $[\text{CH}_3\text{COOCH}(\text{CH}_3) \text{CH}_2\text{N}(\text{CH}_3)_3]$  Br. Com-  
parison and discussion of literature data. The  
bibliography covers 13 titles. -- T. Zverova

Card: 1/1

H - 58



VONDRASEK, V.

"Practical Problems of Electrolytic Polishing in Laboratories and Factories." p. 196  
(Hutník, Vol. 3, no. 9, Sept. 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress,  
Feb. 1954, Uncl.

VONDHASEK, Vaclav, doc. inz.; STANKA, Karel, inz.

Problems of thermal treatment of a thin steel strip from  
carbon steel with 1.2 per cent carbon. Sbor VSB Ostrava  
9 no.3:335-345 '63.

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Journal of the Iron and Steel Institute  
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Electrolytic Polishing in the Laboratory and Works: V. Vondrasek. (Horná (Prague), 1953, 2, (9), 184-186). (In Czech). A critical survey of electrolytic polishing practices shows that: (a) Present-day methods are suitable for industrial use only in the case of aluminium, aluminium alloys, and stainless steel; (b) the greatest obstacle lies in the large amount of metal lost by solution at the anode; (c) surface quality is not always satisfactory; (d) methods are often difficult, and electrolytes are unstable; and (e) its main use at present is in metallography.—P. V.

VONDRASEK, J.

"The production of concrete pressure pipes prestressed lengthwise and crosswise."

p. 422 (Mechanizace) Vol. 4, no. 12, Dec. 1957  
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